

HAND DELIVERED

October 24,2004

Ms. Elizabeth O'Donnell, Executive Director **Public Service Commission** 211 Sower Boulevard P.O. Box 615 Frankfort, KY 40602-0615

OPT 9 4 2005

RE: Application for Re-Hearing Cranston-Rowan

PSC Case #2005-00089

Dear Ms. O'Donnell:

Pursuant to a ruling by the Chairman at the Re-Hearing/Oral Arguments in the above case held Monday, October 17, East Kentucky Power Cooperative, Inc. hereby submits an offer of proof by avowal consisting of the Prepared Testimony of Darrin Adams, William A. Rosta and Mark Brewer.

Very truly yours,

exploite Sherman Goodpaster III

Senior Corporate Counsel

SG/ti

Enclosures

H:\Legal\SG letters\ltr-Elizabeth O'Donnell-psc-prepared testimony filing doc

Tel. (859) 744-4812 Fax: (859) 744-6008 http://www.ekpc.coop



In the Matter of

THE APPLICATION OF EAST KENTUCKY)
POWER COOPERATIVE, INC. FOR A CERTIFICATE)
OF PUBLIC CONVENIENCE AND NECESSITY FOR) CASE NO.
THE CONSTRUCTION OF A 138kV ELECTRIC) 2005-00089
TRANSMISSION LINE IN ROWAN COUNTY, KENTUCKY)

PREPARED TESTIMONY OF DARRIN ADAMS ON BEHALF OF EAST KENTUCKY POWER COOPERATIVE, INC.

- 1. Please state your name and address.
- A. Darrin W. Adams, East Kentucky Power Cooperative (EKPC), 4775 Lexington Road, Winchester, Kentucky 40391
- 2. By whom are you employed and in what position?
- A. I am employed by East Kentucky Power Cooperative, Inc., as Supervisor of the Planning Team in the Power Delivery Business Unit.
- 3. As background for your testimony, please briefly describe your educational background and work experience?
- A. I am a graduate of Transylvania University with a Bachelor of Arts in Liberal Studies, and a graduate of the University of Kentucky with a Bachelor of Science in Electrical Engineering. I am a Licensed Professional Engineer in the Commonwealth of Kentucky. I was employed as a transmission planning and operations engineer with Kentucky Utilities/LG&E Energy for more than ten years. I have been employed in my current position with EKPC for more than one year.

- 4. What are your duties and responsibilities as Supervisor of Planning in EKPC's Power Delivery Expansion Department?
- A. I supervise and perform studies related to the planning of all transmission additions to the EKPC system.
- 5. Did you prepare the estimates of the re-dispatch costs reflected as a result of the delay in the construction of the Cranston-Rowan project that was contained in the Affidavit of Mary Jane Warner that was attached to the Application for Rehearing?
- A. Yes.
- 6. What natural gas prices were those re-dispatch costs originally based upon?
- A. Those re-dispatch costs were based on an estimated cost of natural gas of \$6 per MMBtu, which equates to an approximate cost of \$77 per megawatt-hour for EKPC's combustion turbines at J.K. Smith. The estimated cost used for generation at EKPC's Spurlock Generating Station was \$27 per megawatt-hour. Therefore, the net cost to re-dispatch from Spurlock to the J.K. Smith combustion turbines was \$50 per megawatt-hour.
- 7. Were those costs reasonable at the time those estimates were prepared?
- A. Yes.
- 8. Have those natural gas prices increased since that time?
- A. Yes, immediately after Hurricane Katrina and Hurricane Rita passed through the Gulf of Mexico in August and September of 2005, natural gas future prices for January 2006 increased to approximately \$14 per MMBtu, which equates to a cost of \$175 per megawatt-hour for the J.K. Smith cornbustion turbines.
- 9. When did EKPC become aware of this price change?

- **A.** In the latter part of September 2005.
- 10. Have you recalculated the potential re-dispatch costs based upon these new natural gas prices? If so, what are those new costs.
- A. Yes. Those future gas prices were used to update the expected potential re-dispatch costs for the winter of 2006. Furthermore, the estimates for the generation costs for the J.K. Smith combustion turbines beyond the winter of 2006 were changed to \$102 per megawatt-hour (\$8 per MMBtu natural gas) to better reflect expected future gas prices. Using those values of \$175 per megawatt-hour for winter of 2006 and \$102 per megawatt-hour for the remainder of 2006 and all of 2007 and 2008, the net re-dispatch cost (assuming a Spurlock production cost of \$27 per megawatt-hour) becomes \$148 per megawatt-hour for the winter of 2006 and \$75 per megawatt-hour for the remainder of 2006 and all of 2007 and 2008. As a result, the expected total re-dispatch costs become:

	EKPC Re-dispatch Costs Without North-South Transfers	EKPC Re-dispatch Costs With 4,000 MW of North-South Transfers
2006 2007 2008	\$ 910,000 \$ 170,000 <u>\$35,710,000</u>	\$ 59,600,000 \$ 58,430,000 \$193,940,000
Total	\$36,790,000	\$311,970,000

This range better reflects the potential total costs to EKPC of generation re-dispatch based on the current expectations for natural gas prices.

- 11. Does this conclude your testimony?
 - A. Yes, it does.

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AFFIDAVIT

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Darrin Adams, being duly sworn, states that he has read the foregoing prepared testimony and that he would respond in the same manner to the questions if so asked upon taking the stand, and that the matters and things set forth therein are true and correct to the best of his knowledge, information and belief.

Subscribed and sworn before me on this 24th day of October 2005.

Veric K- Usaacs
Notary Public
My Commission expires: 12/20/08

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COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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PREPARED TESTIMONY OF WILLIAM A. BOSTA ON BEHALF OF EAST KENTUCKY POWER COOPERATIVE, INC.

- Q. Please state your name and address. -
- A. My name is William A. Bosta, East Kentucky Power Cooperative (EKPC), 4775

 Lexington Road, Winchester, Kentucky 40391.
- Q. By whom are you employed and in what position?
- A. I am Manager of Pricing for EKPC.
- Q. As background for your testimony, please briefly describe your educational background and work experience?
- A. I have a Bachelor's Degree in Economics from Virginia Tech, Blacksburg,
 Virginia, and a Master's Degree in Industrial Management from Lynchburg
 College, Lynchburg, Virginia. My professional career began as an Economist
 with the engineering consulting firm of Hayes, Seay, Mattern & Mattern in
 Roanoke, Virginia. I then worked in the rates and regulatory area for two AEP
 subsidiaries, Appalachian Power Company in Roanoke, Virginia and Indiana
 Michigan Power Company in Ft. Wayne, Indiana. In 1993, I accepted a position

in Regulatory Affairs at Kentucky Utilities Company in Lexington, Kentucky and was subsequently promoted to Director of Regulatory Management for LG&E Energy in Louisville, Kentucky following the merger of KU Energy and LG&E Energy in 1998. In May 2001, I was offered an opportunity to join the EKPC system as Pricing Manager and in June 2001 I assumed my current position.

O. Please provide a brief description of your duties at EKPC.

A. As Pricing Manager, I am responsible for rate and regulatory matters and issues at EKPC and provide support services for all sixteen Member Systems on these issues. I report directly to the Vice President of Finance and Planning.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide an estimate of the effect on customers' monthly bills if the proposed 138 kV transmission line is delayed through the year 2008.

O. How did you prepare the estimates?

A. I began with the estimated additional fuel costs developed by Mr. Adams for 2006, 2007 and 2008 that come about in recognition of the absence of the proposed transmission line. As explained by Mr. Adams, these costs are derived from a redispatch of EKPC's generating units. EKPC would be required to use its Combustion Turbines to generate electricity rather than its coal-fired generation if the proposed line is not built. As the fuel cost for the combustion turbines is expected to be significantly higher than fuel costs for coal fired generation, EKPC will incur a higher level of fuel cost. Mr. Adams is providing an update of the projected natural gas cost for the 2006-

2008 period as a result of recent catastrophic events which were unanticipated and must be recognized.

Q. Please continue.

A. The additional fuel cost amount by year was then divided by the projected level of kWh sales to derive an annual per unit cost (\$/kWh). The per unit cost increase was applied to a typical residential customer using 1,000kWh per month to derive a monthly dollar increase amount. This dollar amount was then divided by the projected average monthly bill amount to derive a percentage increase in the monthly bill.

O. Can you provide a summary of the results?

A. Yes. Shown below are the results by year under the two load flow scenarios outlined by Mr. Adams.

Without N-S Flows		With 4,000 MW N	N-S Flows	
	Monthly		Monthly	
Year	Dollar Increase	% Increase	Dollar Increase	% Increase
2006	\$0.07	.1%	\$4.64	6.2%
2007	\$0.01	.01%	\$4.39	5.9%
2008	\$2.33	3.1%	\$12.68	16.9%

Q. Does this conclude your testimony?

A. Yes, it does.

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STATE OF KENTUCKY)
)
COUNTY OF CLARK)

William A. Bosta, being duly sworn, states that he has read the foregoing prepared testimony and that he would respond in the same manner to the questions if so asked upon taking the stand, and that the matters and things set forth therein are true and correct to the best of his knowledge, information and belief.

William A. Bosta

Subscribed and sworn before me on this 21st day of October 2005.

Notary Public
My Commission expires: 18-20-08

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In the Matter of:

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PREPARED TESTIMONY OF MARK BREWER ON BEHALF OF EAST KENTUCKY POWER COOPERATIVE, INC.

- 1. Please state your name and address.
- A. Mark Brewer, 1050 Clear Creek Road, Nicholasville KY, 40356
- **2.** By whom are you employed and in what position?
- A. I am employed by EKPC, as an Administrative and Support Team Supervisor.
- 3. As background for your testimony, please briefly describe your educational background and work experience?
- A. I have a Bachelor of Science degree in civil engineering from the University of Kentucky, I'm a Registered Professional Engineer and Licensed Land Surveyor in the commonwealth of Kentucky and have 26 plus years of experience in the area of design and construction of electric transmission lines.
- 4. Did you design the proposed Cranston-Rowan 138kV transmission line?
- A. Yes.
- 5. What is the purpose of your testimony.

- **A.** The purpose of my testimony is to provide information related to the feasibility of a route proposed by the PSC, for which, a part of the line would share right-of-way with a 138kV Kentucky Utilities Company line.
- 6. Did you evaluate the feasibility of this route?
- A. Yes
- 7. Can you provide the commission with an overview of what you were able to determine from your evaluation?
- A. The route proposed by the commission, as modified by EKPC to minimize public impact, is not feasible, if the intent is to share right-of-way with the Kentucky Utilities Company Kenton Rodburn 138Kv line.
- 8. Can you explain to the commission why this route is not feasible.
- A. One of the criteria in designing a line that is parallel to an existing line is to evaluate conductor blowout and to design the line such that one line will not come in contact with the other. The span lengths of the proposed PSC route are of such length, due to the topography, that the conductors of this line would be blown (by the NESC high wind case) into contact with the outside phase of the KU circuit. This assumes that proposed route is built at or near the edge of the KU 150 ft. right-of-way and overlaps/shares right-of-way with the KU line.
- 9. Realizing that the lines can't share right-of-way, how far apart will they need to be to prevent conductor contact.
- **A.** Our preliminary evaluation at this time indicates that the centerline to centerline distance between the two transmission lines would need to be approximately 160

- feet apart. Resulting in separate right-of-ways for the two lines and a 35 ft. strip of land between the two easements.
- 10. Is it possible that the lines would need to be more than 160 ft. apart. If yes, explain.
- A. Yes, for several reasons. As stated earlier our evaluation is preliminary and until the survey and final designs are complete we will not know the exact extent of the blowout. A blowout analysis has not been performed on the KU line, which could require more than 160 feet. The 160 ft. number is only based on a 5 feet margin of safety and due to the critical nature of both of these lines, KU and EKPC may require this number to be larger.
- 11. With respect to the PSC route, if this line was placed adjacent to the KTJ line but far enough apart to prevent violation of the conductor blowout criteria, would this route be practical?
- A. No.
- 12. Can you explain to the commission why this route is not practical?
- A. The PSC route is not practical or justifiable for the following reasons: (1) The modified PSC route is 3.0 miles longer. (2) Although the PSC route utilizes 1.7 miles of existing right-of-way, it is still requires an 18.8 % longer route than the USFS preferred route. (3) Approximately 3.0 miles of line are still located on USFS property. (4) The USFS has already considered a number of routes, one of which included a route parallel to the KU line and after nearly 3 years of extensive study and review ruled out a route which did not parallel the KU line. It is important to note that when the USFS evaluates a route they look at it in its entirety i.e. they look at the impact to both public and private lands. (5) The PSC route requires

19.2% additional acres of right-of-way. (6) Since both the PSC route and the USFS preferred route are primarily forested areas, additional forest lands will need to be cleared for the PSC route. If you consider the fact that the USFS preferred route left approximately 20% of the trees in the hollows uncut, the additional deforestation of the PSC route will be significant. (7) The PSC route require more access roads to be built. (8) The PSC route will effect 87.5% more property owners. (9) The PSC route will have a significantly larger impact to residential developments. And finally, (10) the process followed by the USFS in determining and selecting the route as identified in the EA is in compliance with the National Environmental Policy Act (NEPA) as well as all applicable Federal and State Environmental policy.

- 13. Does this conclude your testimony?
- A. Yes, it does.

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AFFIDAVIT

STATE OF KENTUCKY **COUNTY OF CLARK**

Mark Brewer, being duly sworn, states that he has read the foregoing prepared testimony and that he would respond in the same manner to the questions if so asked upon taking the stand, and that the matters and things set forth therein are true and correct to the best of his knowledge, information and belief.

Subscribed and sworn before me on this 24th day of October 2005.

<u>Vlni K. Usaacs</u> Notary Public My Commission expires: 12/20/08